Supporting Information

A Novel Colorimetric Fluorescent Probe for SO_2 and Its Application in Living Cells Imaging

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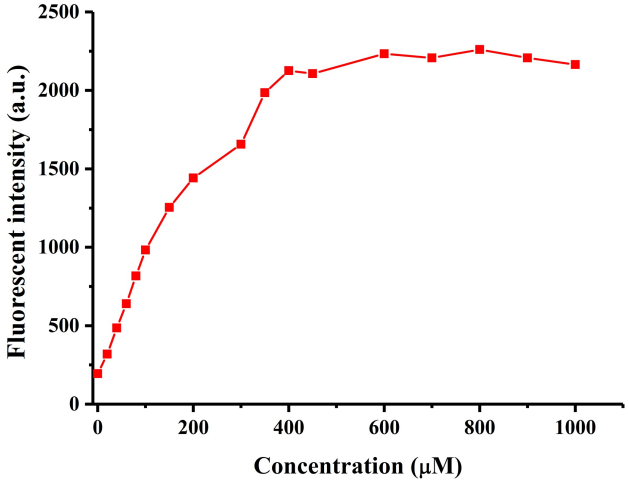


Figure S1 Fluorescence intensity changes for **BPO-Py-Cl** (10 μM) interacting with SO_3^{2-} (0, 20, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000 μM) (λ_{ex} = 390 nm, λ_{em} = 495 nm, slit: 2.5 nm/5 nm) in 10 mM PBS:DMSO = 8:2 pH 6.0 buffer solution.

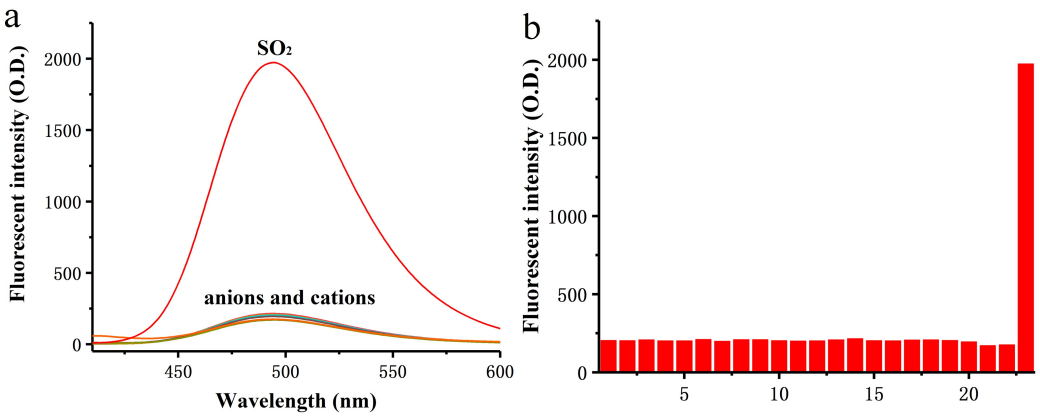


Figure S2. Fluorescence spectrum (**a**) and intensity (**b**) changes of **BPO-Py-Cl** with 500 μM SO_2, other representative anions and biologically abundant metal ions. 1. **BPO-Py-Cl**, 2. F^-, 3. Cl^-, 4. Br^-, 5. I^-, 6. CO_3^{2-}, 7.AcO^-, 8. PO_4^{3-}, 9.SCN^-, 10. $S_2O_3^{2-}$, 11. HS^-, 12. Li^+, 13. Na^+, 14. K^+, 15. Mg^{2+}, 16. Ca^{2+}, 17. Cu^{2+}, 18. Zn^{2+}, 19. Ni^{2+}, 20. Fe^{2+}, 21. Fe^{3+}, 22. Pb^{2+}, 23. SO_2.

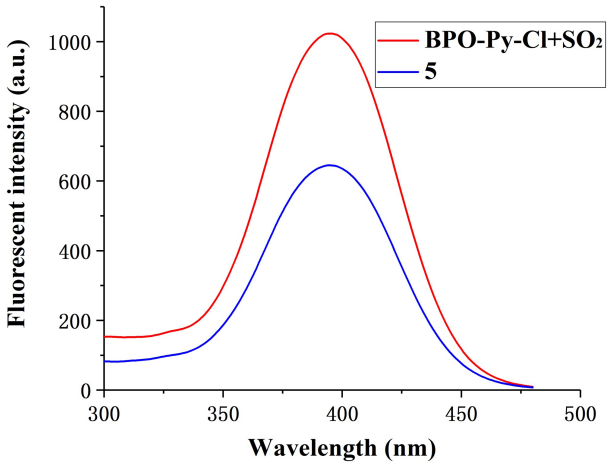
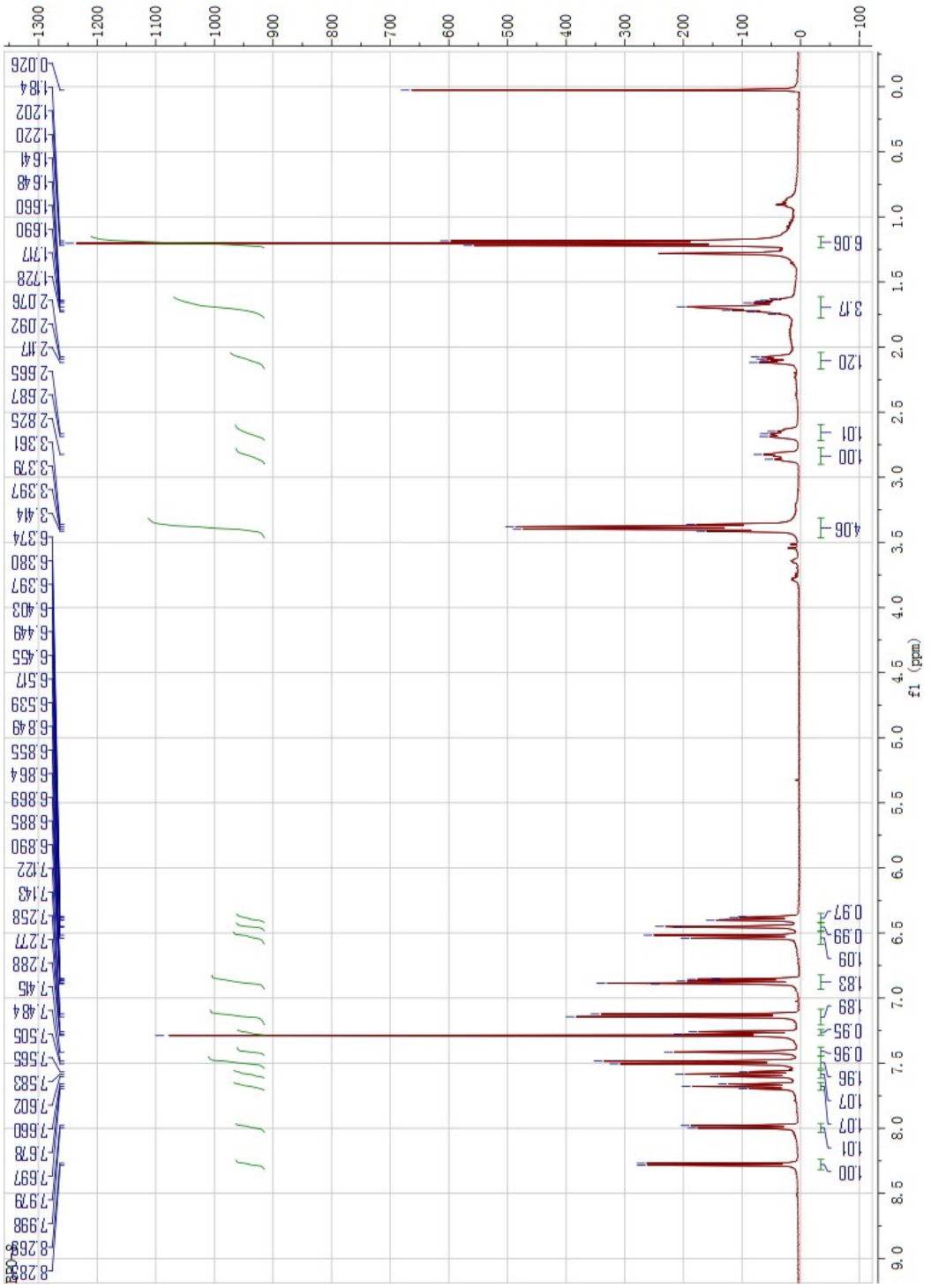
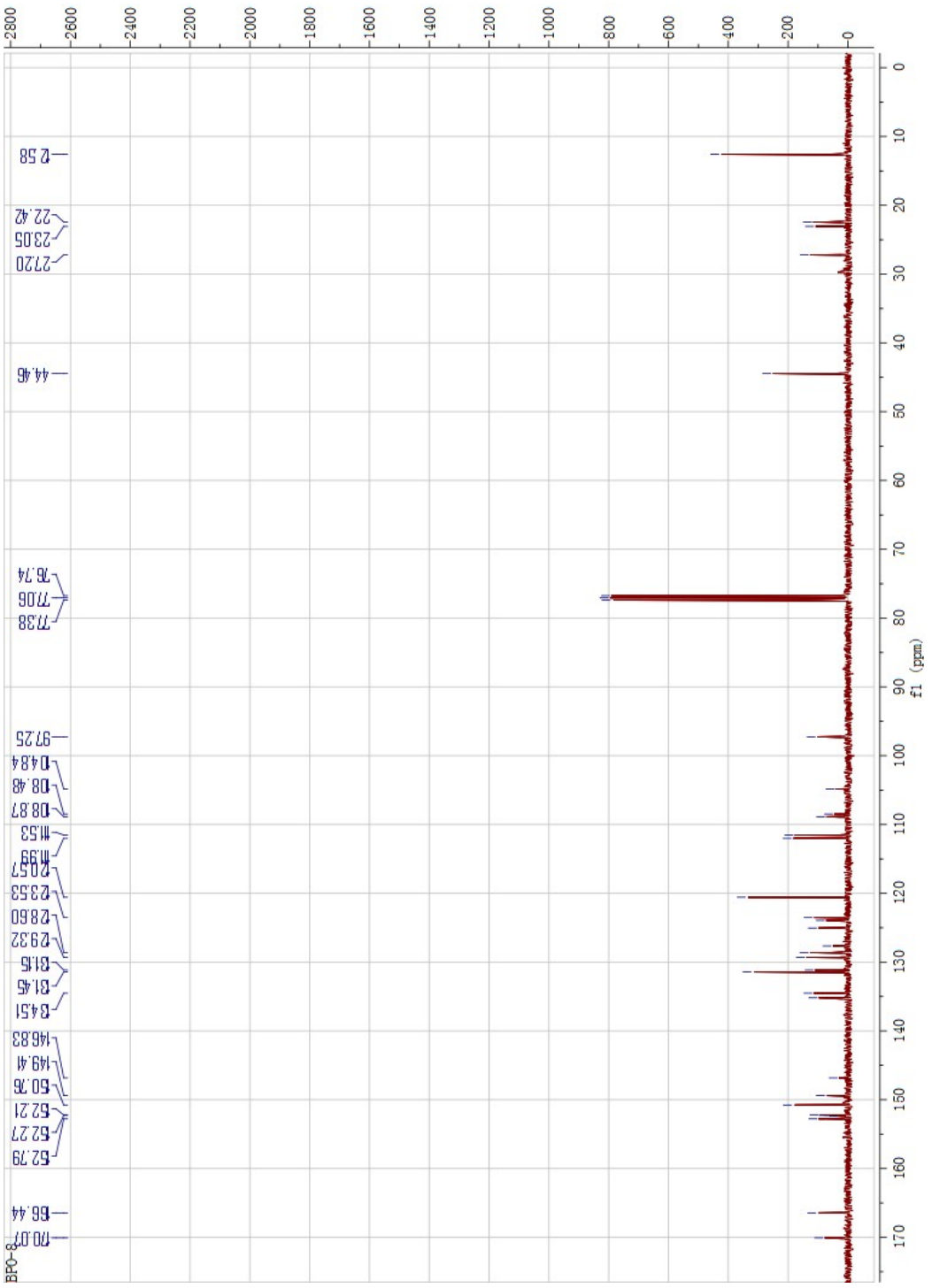


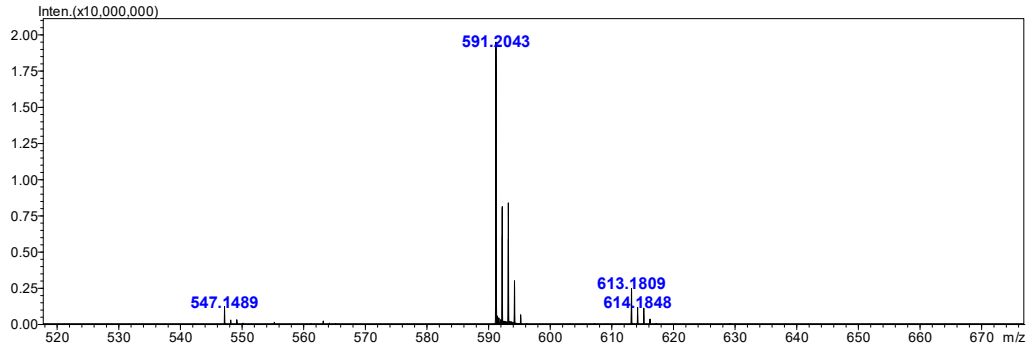
Figure S3. The excitation spectrum of compound **5** and **BPO-Py-Cl** interacting with SO_2.

^{1}H NMR, ^{13}C NMR and HRMS Spectra




BPO-8
170.07
166.44
152.79
152.27
152.21
150.76
149.41
146.83
134.51
131.45
131.15
129.32
128.60
123.53
120.57
111.99
111.53
108.87
108.48
104.84
97.25
77.38
77.06
76.74
44.46
27.20
23.05
22.42
12.58
f1 (ppm)

MS(E+)


Inten.(x10,000,000)
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1.50
1.25
1.00
0.75
0.50
0.25
0.00
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613.1809
614.1848
547.1489
520
530
540
550
560
570
580
590
600
610
620
630
640
650
660
670
m/z